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Guidance Document

For Listing Waterbodies in the Region 10 §303(d) Program

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1. Introduction

Section 303(d) of the Clean Water Act provides an important building block for managing the quality of the Nation's waters. Section 303(d), used in conjunction with standards, provides the tools to establish water quality goals in any geographic area, to assess the condition of those waters, to identify areas needing special attention, and to develop / implement plans which remedy problems. Specifically, the §303(d) process consists of:

1) Identifying waters where required pollution controls are not expected to attain or maintain water quality standards;

2) Setting priorities and targeting resources for development of additional pollutant controls; and

3) Establishing Total Maximum Daily Loads (TMDLs) for use in developing controls for point and nonpoint source pollutants.

A TMDL describes the maximum amount of pollutants from point and nonpoint sources, including natural background, that may enter the waterbody without violating water quality standards. The development of a TMDL is based on the relationship between pollution sources and in-stream conditions. As a result, a TMDL provides a sound basis for identifying and establishing the water quality-based pollution controls necessary for a waterbody to achieve water quality standards.

The §303(d) process first identifies where pollution problems remain, then sets priorities for addressing the problems, and finally develops solutions to the problems. It is a valuable tool for a number of reasons which include:

- providing a decision-making framework for focusing pollution control efforts to protect water quality / aquatic resources;
- developing a defensible technical basis for requiring pollution controls; and
- creating opportunities for integrating the management of both point and nonpoint sources.

In addition, its public participation requirements encourage involvement of the public in managing our water resources.

The Watershed Protection Approach (WPA) is a comprehensive, integrated strategy for more effectively restoring and protecting aquatic ecosystems and protecting human health in geographically targeted watersheds. Section 303(d) fits well with current efforts to move toward a watershed or basin approach to water quality management. The TMDL process is the technical backbone of the WPA. The WPA allows water resource managers and scientists to determine, on a watershed scale, both the pollutants and other stressors causing impairments as well as the allocations necessary to meet applicable water quality standards. To complement the WPA, the TMDL process provides a mechanism for states to target and prioritize watersheds where action is needed. The public participation requirement of TMDLs also encourages stakeholder involvement in the development and implementation of watershed plans. Further, a schedule for developing TMDLs can be effectively integrated into a state's cyclical basin planning approach to implement its water quality programs.

Purpose of this Guidance:

In order to improve the efficiency and effectiveness of the §303(d) program in Region 10, an overall strategy for its implementation is needed. The Region 10 states have identified as one key component of this effort the need to ensure consistent quality of the lists of waters identified as needing additional controls. As a result, the states asked that Region 10 develop a regional guidance concerning the listing of waters under §303(d).

The purpose of this document is intended to fulfill that request. It is designed to be used in conjunction with existing §303(d) program guidance[1] to further clarify how states should address specific issues that they confront as they develop their §303(d) lists. Specifically, this guidance:

- clarifies the types of waterbodies that states should include on their §303(d) lists.
- addresses specific situations that arise when states make listing decisions.

EPA seeks to preserve flexibility for Region 10 states to implement a §303(d) program that complements most efficiently their individual water quality programs.

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[1]EPA Office of Water, *Guidance for Water Quality-based Decisions: The TMDL Process*, April 1991 (EPA 440/4-91-001); Geoffrey H. Grubbs, Director, US EPA Assessment and Watershed Protection Division, *Memorandum to Water Quality Branch Chiefs, Regions I - X and TMDL Coordinators, Regions I - X: Supplemental Guidance on Section 303(d) Implementation*, August 13, 1992, and Geoffrey H. Grubbs, Director, US EPA Assessment and Watershed Protection Division, *Memorandum to Water Management Division Directors and Regional TMDL Coordinators: Guidance for 1994 Section 303(d) Lists*, November 26, 1993.

Approach:

Section 2 of this guidance provides a brief overview of the §303(d) listing process. Included is a review of existing regulations, policy, and guidance. Section 3 of the guidance, "The Scope of the §303(d) List," deals with some of the major issues states must address when developing the lists. Specifically, the section lays out a process to identify impaired and threatened waters, describes the role of best professional judgment in developing the list, addresses specific circumstances that affect listing decisions, describes the relationship of the §303(d) list to other lists of impaired waters, discusses the role of public participation, and provides a summary of characteristics which Region 10 believes reflect a high quality listing process.

The guidance focuses on the listing of waters by states. Section 4, "Tribal Issues" expands discussion of the relationship of §303(d) to tribal concerns. Section 5, "Activities in Watersheds with Listed Waters," briefly discusses the implications to on-going or planned management activities in watersheds where waters are listed under §303(d).

Incorporated by reference into this document are federal regulations, national guidance, and previous regional guidance. The document also incorporates issues that EPA addressed when developing a §303(d) list for the State of Idaho.[2] (EPA was ordered to develop Idaho's list after the U.S. District Court vacated EPA's approval of Idaho's 1992 §303(d) list.[3])

[2]Region 10 EPA, 1994 List of Water Quality-Limited Waterbodies for the State of Idaho, and Appendix A: Response to "General Comments" Concerning EPA's 1994 303(d) List for the State of Idaho, October 7, 1994.

[3]Order on Partial Summary Judgment in Idaho Sportsmen's Coalition v. Browner, No. C93-943 (W.D. Wash., April 14, 1994), p7.

2. Overview of the §303(d) Listing Process

The appropriate breadth of the §303(d) list has been the focus of regulations, numerous guidance documents, and court decisions. According to the Clean Water Act and EPA's implementing regulations, the §303(d) list consists of both impaired and threatened waters that do not or are not anticipated to meet applicable water quality standards after the application of technology-based or other required controls. As a result, these waters need additional controls to meet or maintain those standards, e.g. through a TMDL.

a. EXISTING REGULATIONS, POLICY, GUIDANCE

Regulations for implementing the §303(d) program are codified at 40 CFR §130, specifically §130.2, §130.7, and §130.10. These regulations help define the types of waters to include on the §303(d) list and the types of information to use in developing those lists.

In developing their §303(d) lists, states must identify those water quality-limited segments still requiring TMDLs for which:

(1) technology-based effluent limitations (required by §301(b), §306, §307 or other sections);

(2) more stringent effluent limitations required by state or local authority; and

(3) other pollution control requirements (e.g., best management practices)

are not stringent enough to implement any applicable water quality standards [see 40 CFR §130.7(b)(1)].

EPA has provided guidance to help states determine which water quality-limited waterbodies to include on their §303(d) lists. EPA's 1991 guidance provides an overview of the §303(d) program.[4] More recent national guidance discusses minimum requirements for the 1994 lists and addresses specific issues that arose during development of the 1992 lists.[5] States should refer to the 1994 listing guidance directly for the specific issues addressed.

Given this as background, Region 10 states should use EPA's previous guidance together with this regional guidance document as they implement their §303(d) programs.

[4] See 1991 guidance at note 1.

[5] See 1994 listing guidance at note 1.

b. THE LISTING CYCLE

Section 303(d) requires each state to submit its list of waters *"from time to time"*. Regulations promulgated in 1992 [40 CFR §130.7] established that, for the purposes of identifying water quality-limited waters still requiring TMDLs, *"from time to time"* means once every two years. Thus, current rules for §303(d) list submission define a biennial listing cycle which coincides with §305(b) reports. The rules indicate that the §303(d) list may be submitted as part of the §305(b) report or under separate cover. Existing guidance (1993) also recognizes that because §303(d) lists are dynamic, they may change from one listing cycle to the next.

3. The Scope of the §303(d) List

a. BUILDING THE §303(d) LIST

A two part decision process is employed in building a §303(d) list. First, states must use existing, readily available data and information to identify water quality-limited (WQL) waters. Second, states must evaluate the adequacy of required controls to determine if they will enable the waterbody to achieve applicable water quality standards. The remainder of this guidance describes the process for appropriately narrowing the §303(d) list so that it provides an accurate, working list of waters that require TMDLs. Issues addressed in this guidance which relate to building the §303(d) list include:

- Identifying WQL waters
- WQL waters not included on the §303(d) list
- Threatened waters
- Public participation
- Submission of the §303(d) list to EPA

Identifying WQL Waters

As mentioned above, states must first identify all waters that fail to achieve applicable water quality standards. Water quality standards include designated and existing uses[6], criteria to protect those uses (including numeric and narrative criteria), and antidegradation requirements [see 40 CFR §130.7(b)(3)]. States should rely on a combination of data, documentation, and best professional judgment to determine when waters are WQL.

Determining how much data and information are adequate to include a waterbody on the §303(d) list is a deliberative process involving judgment. As described in Federal regulations [40 CFR §130.7(b)(5)] and EPA's previous guidance, states should consider the following related information in building their §303(d) lists.

- *Evidence of numeric criterion exceedances.* Example: Ambient monitoring data demonstrates exceedances of the state's ammonia criteria.

- *Beneficial use impairment.* Listing a waterbody due to impairment of designated and existing uses requires information that shows the use is not being maintained and that this failure is due to degraded water quality. Example: A waterbody designated as

[6] Existing uses are those uses attained at any time since November 28, 1975. [40 CFR §131.3(e)].

a cold water fishery has exhibited a documented decline in fish populations that thrive in cold water. The population decline is tied to the existence of sediment deposits on the stream bottom which inhibit or preclude spawning.

- *Evidence of not meeting a narrative criterion.* Example: Biological assessment demonstrates that a loss of biological integrity has occurred, in violation of a state's biological criterion.

- *Technical analyses.* Example: Predictive modeling or Rapid Bioassessment Protocol results show that criteria will be exceeded or designated and existing uses will not be protected.

- *Other CWA assessment mechanisms.* Example: If a waterbody is included on a §314 or §319 assessment, or if a state identifies a waterbody as not supporting or only partially supporting its designated and existing uses under §305(b), the data supporting those assessments should be reviewed to determine whether the waterbody should be included on the §303(d) list.

- *Other information sources.* Other sources of information that may support listing based on best professional judgment include information from the public participation process and information regarding the efficacy of required controls that are currently being implemented or other required controls to be implemented in the near future. Such information would include water quality problems reported and documented by tribal, local, state, or federal agencies, members of the public, or academic institutions.

States should actively solicit organizations and groups for research they may be conducting on water quality [40 CFR §130.7(b)(5)(iii)]. The public participation process is described later in this guidance. States should use best professional judgment to determine whether publicly submitted information is adequate to justify including a waterbody on the §303(d) list. As with other listing decisions, when relying on professional judgment, states must clearly describe and document the rationale for their decisions. The rationale must be included in the record supporting the final §303(d) list so that EPA can determine whether the list is reasonable and should be approved.

States must identify the corresponding causes of impairment when listing specific waters [40 CFR §130.7(b)(4)]. However, they need not identify the specific *sources* of any pollutants discharged to the waterbody or the sources of any other impairment to the waterbody. For example, a waterbody must be included on the §303(d) list if elevated temperatures are causing impairment of designated and existing uses, even if the specific sources or causes of the temperature elevations are unknown. Another basis for listing waters is where a specific fisheries has declined and the decline can be attributed, at least in part, to a specific condition caused by pollution in that segment.

States may encounter some of the following situations when determining whether or not water quality standards exceedances have occurred:

Beneficial Use Impairment. Waterbodies should be considered for inclusion on the §303(d) list if, due to stresses to the waterbody's chemical, physical or biological integrity, they do not fully support designated and existing uses.

Narrative Standards. EPA recognizes that determining nonattainment of narrative water quality criteria involves best professional judgment. Evidence of not meeting narrative criteria constitute exceedances of water quality standards. Therefore, such waters are candidates for the §303(d) list. Because best professional judgment plays a critical role in this determination, states need to document the rationale for their listing decisions in order to provide a basis for evaluating the reasonableness of these listing decisions.

Forest Plan Standards and Guidelines. Objectives and standards developed by Federal land management agencies [e.g. USFS Forest Plan Standards & Guidelines] do not have the same regulatory significance for listing purposes as do state water quality standards adopted under §303. Therefore, unless these forest standards/objectives are incorporated into applicable water quality standards, exceedances of these standards/objectives alone does not justify listing under §303(d).

EPA believes, however, some forest plan standards/objectives, as applied to the specific forest for which they were developed, can provide appropriate information to consider in determining whether water quality standards for a particular water in that forest are being achieved[7]. For example, many states have narrative criteria for sediments. Waters should be included on a states' §303(d) list, if, based on the professional judgment of the state, exceedances of the forest plan standards/objectives for sediments would result in impairment of designated and existing uses. This determination could be strengthened by confirmation of degraded habitat conditions. Conversely, if the forest standards establish a temperature of 13° C but state water quality standards allow 18° C, then a stream reaching 15° C would exceed the forest guidelines but not the state water quality standard, and therefore need not be included on the §303(d) list for temperature exceedances.

Fish contamination. Contaminated fish may indicate exceedances of water quality standards even if the state has not issued a fish consumption advisory for a waterbody. If the level of contamination in fish tissue results in risks to human fish consumers higher than that allowed by water quality standards, states should include those waters on the §303(d) list.

[7]Because forest plan standards/objectives are site (forest) specific, standards for one forest are not necessarily applicable to others. See Idaho decision documents.

States must also consider listing those waters where fishing or shellfish bans and/or advisories are currently in effect or anticipated. States must justify any decisions not to list waters where existing and readily available information indicates that fish contaminated at levels exceeding water quality standards are present [40 CFR §130.7(b)(6)(iii)].

WQL Waters Not Included on the §303(d) List

Water quality-limited (WQL) waters are those waters that do not or are not expected to meet water quality standards after implementing Best Practicable Technology (BPT), Best Available Technology (BAT), secondary treatment, and New Source Performance Standards (NSPS), as described in §301 and §306 of the CWA and defined under EPA regulations. Not all WQL waterbodies, however, must be included on the §303(d) list. EPA regulations provide that waters need not be included on a §303(d) list if other Federal, state, or local requirements are stringent enough to result in the attainment or maintenance of applicable water quality standards [40 CFR §130.7(b)(1)].

This provision describes three categories of controls that may justify a state's decision not to list a particular WQL water *[see page 2-1]*. The first two categories address effluent limitations and apply to point sources. Under these provisions, waterbodies impaired only by point sources that are out of compliance with required technology-based or water quality-based controls should not be included on a state's §303(d) list unless the required controls, in themselves, will not attain water quality standards [40 CFR §130.7(b)(1)(i) & (ii)].

In listing decisions, the third category has generated the most discussion. Specifically, the regulation reads:

> *"Each State shall identify those water quality-limited segments still requiring TMDLs within its boundaries for which"* ... (iii) *"other pollution requirements (e.g., best management practices) required by local, State, or Federal authority are not stringent enough to implement any water quality standards (WQS) applicable to such waters."*

Best Management Practices or BMPs are mentioned specifically in the regulation. BMPs designed to address agricultural, forestry, or other nonpoint source problems do not necessarily guarantee that water quality standards will be met. Forest Practices Acts, for instance, generally deal with proposed future activities, but do not address effects of past activities. BMPs designed to protect water quality from future activities may not adequately address past impairments or situations where mixed land uses occur.

Factors to be considered in evaluating whether *"other pollution requirements"* are stringent enough to implement applicable water quality standards include:

- *Data analysis* of the controls relative to the problem;
- *Mechanisms requiring* implementation of poliution controls;
- *Reasonable timeframe* for attaining water quality standards; and
- *Monitoring* to track implementation and effectiveness of controls.

Data Analysis is necessary to link specifically identified controls [either through Federal, state or tribal authority, local ordinances, or other means] to the water quality concern so that applicable water quality standards are attained. To ensure that identified controls are appropriate for the receiving water, the analysis must, at a minimum:

- be specific to the water quality problem;
- show that the required controls will result in attainment of applicable water quality standards, including the use(s) to be protected; and
- be based on scientifically valid, representative information of known quality.

One example considered is WQL waters which exceed the state water quality criterion for temperature. The problem has been characterized through an analysis of stream temperature focused solely on riparian shading. Controls are developed from this analysis which address only riparian shading needs. Although riparian shading may be important, temperature exceedances tend to occur during low flow conditions. To be specific to the problem, the role of water quantity and hydrology in contributing to temperature exceedances need to be considered. In addition, the analysis needs to consider the effect of channel changes due to excessive sedimentation which could also lead to temperature exceedances. In this case, the analysis (i.e. addressing only riparian shading relative to stream temperature) would not be sufficient to keep a WQL water off the list. The analysis needs to: (1) be specific to the problem by considering all significant causes of the temperature exceedances, and (2) the controls need to be shown to be effective in addressing temperature exceedances.

Required Mechanisms are necessary to ensure that the other pollution controls authorized either by Federal, state or tribal authority, local ordinances, or other means, will be implemented. Examples of adequate pollution requirements include:

- controls required by Federal, state, tribal, or local government agency(s), e.g. in a permit or a license; or
- controls backed by performance bond, crop support payments, or similar contracts.

Thus, BMPs required by licenses, permits or other mechanisms which lead to attainment of applicable WQS, such as those issued by the Forest Service and BLM, could be considered required controls for the purpose of §130.7(b)(1)(iii). Similarly, farm plans requiring implementation of agricultural BMPs as a condition for receiving crop support payments or other funds also could also be considered appropriate mechanisms which ensure that those BMPs would be implemented.

Reasonable Timeframe is necessary to clearly define expectations, both in terms of implementation and of WQS attainment. Definitions for reasonable timeframe could be expressed in several ways, for example:

- incorporated into permit cycle (e.g. 5 years);
- established by state water quality standards;
- will occur prior to next listing cycle;
- established by compliance schedule; or
- other statutory requirements.

A reasonable timeframe for implementation of controls and for WQS attainment is a case-specific determination. This determination depends on a number of factors, including, but not limited to, receiving water characteristics, persistence, behavior and ubiquity of pollutants of concern, type of restoration / remediation activities necessary, available regulatory and non-regulatory controls, and individual state requirements.

In some cases, for example, water quality standards may reasonably be expected to be met within one NPDES five-year permit cycle. In other cases, the reasonable expectation of meeting water quality standards could be twenty years, following, for example, the implementation of controls on nonpoint sources such as sediment or wet-weather flows. In still other cases, the reasonable expectation of meeting water quality standards could be keyed to the implementation of other controls (e.g. air quality standards).

Monitoring information is needed to address each factor considered in evaluating *"other pollution requirements"*. For waters that are not listed based on the expectation that applicable water quality standards will be met, states would need to ensure that an appropriate monitoring program is in place to track the implementation of BMPs or other controls, water quality improvements, and progress toward meeting water quality standards. In each listing cycle, states must reevaluate these waterbodies based on the monitoring information. If the controls are not actually being implemented according to the reasonable timeframe, or if additional information shows the controls are not stringent enough to achieve water quality standards, the waters must be included on a state's next §303(d) list.

Threatened Waters

The §303(d) list must include "threatened" waters. Threatened waters are those waters that currently meet water quality standards, but are "not expected to meet" standards in the near future (i.e., within the next listing cycle). The concept of threatened waters was reiterated in a recent court decision regarding the 1992 Idaho list. The Court stated that *"[EPA] must reject a list that fails to identify all waters that do not or are not expected to meet applicable water quality standards (130.2(j)). This includes any waters that are threatened, not just those already impaired".*[8]

To identify threatened waters, states should consider information indicating declining or adverse trends in water quality. The state should also consider the effect of new activities that are expected, within the next listing cycle, to adversely affect water quality including designated and existing uses, even after the application of required controls. The criteria used to evaluate information for listing impaired waters should also be applied to the information for listing threatened waters.

Public Participation

Public participation plays a crucial role throughout the §303(d) listing process. Region 10 states have used the following steps to integrate public input into a state's §303(d) list:

- Public notice requesting information or to announce preliminary draft list (optional);
- Public forums or workgroups to collect data and discuss listing process (optional);
- Internal workgroups to review data submitted by the public (optional);
- Public notice of draft list and solicitation of public comment (at least a 30-day comment period is required, and public hearings should be held if the state finds they are warranted);
- Review of information received on draft list (required); and
- Establish final list and respond to public comments (required).

[8]Order on Partial Summary Judgment in Idaho Sportsmen's Coalition v. Browner, No. C93-943 (W.D. Wash., April 14, 1994).

In establishing the final §303(d) list, states must prepare a summary of responses to comments that describes the rationale for decisions to list or not to list certain waters. Typically developed in response to public comments, this summary is a key component of the rationale justifying a state's listing decisions, and will constitute an important part of EPA's administrative record supporting its approval or disapproval of a state's list.

Submission of the §303(d) List to EPA

When a state submits its §303(d) list and supporting documentation to EPA for review and approval, the submission will constitute the bulk of the administrative record supporting EPA's approval of the list. Therefore, it is critical that the state's submission be as complete as possible. A complete submission should include:

- the §303(d) list, including identification of the pollutants impairing water quality, the priorities for TMDL development for all waters on the list[9], and identification of waters targeted for TMDL development during the next listing cycle;
- a description of the process the state used in developing the list, including a copy of the public notice announcing that a draft list was made available for public review and comment;
- any listing criteria / guidelines used by the state in developing the list, including criteria used by the state in establishing priority rankings and making targeting decisions;
- the basis for listing decisions made; and
- a summary of the responses to public comments.

EPA may request additional supporting information / documentation from a state during the review process. For example, Region 10 has found it extremely useful to request copies of public comments received by the state to better understand the nature of the issues raised and the state's responses to comments. In addition, the public often raises issues directly to EPA concerning specific waters a state may have listed or not listed. Region 10 has sometimes found it very useful to contact states concerning those waters to better understand the state's rationale for listing or not listing them.

[9]This document does not discuss how states should prioritize §303(d) waters for TMDL development.

b. SUPPORTING INFORMATION

In developing §303(d) lists, existing readily available data and information is used to determine which waterbodies should be included. Several issues related to supporting information have been identified in Region 10 which need additional discussion. These include:

- Importance of monitoring
- Role of best professional judgment
- Data quality / quantity

Importance of Monitoring

Monitoring programs are a crucial component of the §303(d) listing process. Although monitoring information is not the only information that states may use to list waters, it is a crucial underpinning of the entire §303(d) program. Water quality data enable states to determine the current status of the waters as well as to identify trends in water quality over multiple listing cycles. Monitoring data also help states determine water quality improvements that result from controls implemented through §303(d) and other water quality management programs.

States should focus on building strong monitoring programs so they will be able to rely on accurate information when making listing decisions. As described below, states will typically use a combination of monitoring data and best professional judgment in many listing decisions. However, states have developed a variety of approaches to environmental monitoring to address their individual needs and resource issues. Region 10 believes it is important for states to have the flexibility to develop their own approaches to monitoring, and does not intend to develop specific monitoring requirements for the §303(d) program.

In addition to monitoring the status of water quality, states should ensure that a monitoring program is in place to monitor BMP implementation when BMPs are used as the basis for removing waters from the list. States should also verify that these controls are being implemented as planned.

Role of Best Professional Judgment

Throughout the listing process, best professional judgment [and the documentation underlying these decisions] plays an integral role in determining which waters to include on the §303(d) list. Building an adequate §303(d) list involves a series of determinations regarding the current status of a state's waters. This includes judgments about the quality and adequacy of existing data and other lists of impaired waters. It also includes determinations about the ability of required controls to meet water quality standards.

Best professional judgment must be exercised in developing §303(d) lists. Examples of situations where best professional judgment must be employed include the use of narrative criteria, determining designated and existing use impairment, evaluating the quality of data, determining whether required controls will achieve water quality standards, and developing TMDLs. A more specific example might be fishery professionals who supply documentation on habitat degradation as a cause of use impairment. In all cases, states must document the information or rationale supporting best professional judgment decisions. In the example above, documentation of habitat degradation might include quantitative or qualitative assessments of fish habitat condition using commonly accepted assessment techniques / approaches.

States often receive "anecdotal" information from the public or other sources. Anecdotal information has no supporting information or data. As a result, anecdotal information, by itself, may not be sufficient to justify including the waterbody on a state's §303(d) list. Note that anecdotal information alone may be sufficient to place waterbodies either in the state's §305(b) report of waters not supporting their designated and existing uses or on a list of "suspect" waters slated for follow-up monitoring, depending on the criteria states use in developing those reports and lists. It is important that states keep a record of why these waterbodies are included in the §305(b) report or on suspect waters lists. This is needed so that the basis for not including them on the §303(d) list is documented and can be part of the record supporting the §303(d) list.

Data Quality / Quantity

It is important that states use the best information available in developing their §303(d) lists because these lists influence the setting of priorities for states' pollution control efforts. Although monitoring data are important in making §303(d) listing decisions, the lack of monitoring data for a particular waterbody does not preclude a state from listing such a waterbody. Rather, EPA expects states to consider many sources and types of information in order to develop a comprehensive §303(d) list.

At the same time, EPA recognizes that states need to evaluate the adequacy of all existing and readily available information and data to ensure that it reasonably supports their §303(d) listing decisions. States commonly use quantitative guidelines / criteria as well as best professional judgment to make these adequacy determinations. Because of the numerous sources and types of data EPA expects states to consider, it is neither feasible, nor necessarily desirable, for EPA to attempt to establish definitive criteria and guidelines to cover the myriad of data quality / quantity issues for all pollutants and situations states encounter. However, EPA notes that key data quality / quantity issues often addressed by states include the following:

- A clear definition of what constitutes an exceedance of WQS; and

- A clear statement as to whether QA/QC plans are required by the state to verify any data submitted to the state to support the listing or non-listing of a waterbody, and if so, how QA/QC plans are to be applied and how to assess categories of information for which QA/QC plans are not typically prepared.

Because of the variety of issues states face in making listing decisions, EPA places considerable importance on the listing process used by states, including their data evaluation processes, when reviewing states' §303(d) lists. Even where states have developed general data quality / quantity (QA/QC) guidelines, case-specific judgment on the part of the listing agency may still be needed to evaluate data adequacy. EPA has also provided guidance for making "use support designations" in Appendix B of the 1994 §305(b) guidance.[10] This guidance should be useful for the §303(d) program as well.

c. Relationship of the §303(d) List to Other Clean Water Act Lists

The Clean Water Act requires states to develop a variety of lists and reports that assess water quality, albeit with different purposes than the §303(d) list. Regulations for the TMDL program require states to assemble and evaluate "all existing and readily available water quality-related data and information" to develop their §303(d) lists, including specifically, data and information used as a basis for §305(b) and §319 assessments. Consequently, states have expressed a need for clarification of the relationship between these different lists, including §305(b), §304(l), §319, and §314. Some of these are one-time lists; others are revisited on a regular basis.

When developing a §303(d) list, states must review all of the data and information used to develop the §305(b) reports as well as other lists and assessments. Thus, when a waterbody has been identified on another report or list as not supporting or only partially supporting designated and existing uses, or as being threatened, and there is an adequate record supporting that earlier listing decision, that waterbody should be evaluated for inclusion on the §303(d) list. If a state decides not to include that waterbody, then it must provide a reasonable justification for omitting it.

For example, a state may possess more recent information that indicates that a waterbody listed in 1989 under §304(l) or §319 now attains water quality standards, or that required pollution controls adequate to achieve standards have been established for the waterbody. A justification is necessary because states have already made a reasonable determination supported by information available at that time that waters on these non-§303(d) lists are impaired in some way.

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[10]US EPA Office of Water, *Guidelines for Preparation of the 1994 State Water Quality Assessments (305(b) Reports)*, May 1993. EPA 841-B-93-004.

EPA believes that states should have a reasonable basis for including waters on the §303(d) lists, since §303(d) lists are used to prioritize states' pollution control efforts. EPA acknowledges that the criteria for listing waterbodies under §303(d) are evolving now that states have begun to revisit their lists on a regular basis. EPA also acknowledges that states often used very different criteria for including waters on other lists, despite similarities with §303(d) in the statutory language requiring those other lists. Consequently, Region 10 understands that differences between the §303(d) list and other lists and reports will result. It is important, however, that states be as specific as possible in explaining differences in listing criteria between different lists. Wherever possible, those differences should be discussed on a waterbody-by-waterbody basis, in order to justify decisions to omit waters identified as impaired on lists other than the §303(d) list. Otherwise, decisions to remove waters may not be supported by the §303(d) listing record, and could be challenged as arbitrary and capricious.

The specific types of information collected in the other CWA assessment activities are described in Appendix A.

d. REMOVING WATERS FROM THE §303(d) LIST

Because §303(d) lists are dynamic, they may change from one listing cycle to the next. The dynamic nature of the list stems from new information which becomes available between listing cycles. The starting point for each new listing cycle is the information used to develop the previous list. Changes to the §303(d) list may occur when new information is incorporated into the process. This may include more recent or more accurate data; more sophisticated water quality modeling; identification of flaws in the original analysis that led to the water being erroneously listed; or changes in conditions since the water was listed, such as new control equipment or elimination of discharges. Similarly relevant is new information concerning new permitting, licensing, or other requirements applicable to sources of pollution on listed waters.

As indicated, waters may be added or removed as a result of new information. However, regardless whether the decision focuses on including or not including a water on a subsequent list, there is only one set of criteria used to determine the waters on the §303(d) list. In this guidance, EPA identifies appropriate considerations for removing waters from the §303(d) list and then tracking those waters to ensure that water quality improvements occur as anticipated. Several situations may occur which justify removing of a water from the §303(d) list during the next listing cycle. These situations include:

- Attainment of applicable water quality standards;
- Application of sufficiently stringent pollution requirements; and
- TMDL Implementation for the waterbody designed to achieve water quality standards.

Attainment of applicable standards. A waterbody may be removed during the next §303(d) listing cycle if that waterbody is meeting all applicable water quality standards. Situations where standards have been attained between listing cycles include: (1) water quality standards are achieved through natural recovery or other controls during the period between listing cycles, or (2) the water quality standard has been revised such that the new standard is attained. If a state can demonstrate that water quality has been restored for a listed waterbody, either naturally or through implementation of controls, it may remove a waterbody from the §303(d) list, even though a TMDL may not have been completed for the waterbody.

Application of Sufficiently Stringent Pollution Requirements. As discussed above, 40 CFR §130.7(b)(1) describes three categories of controls that, if applied to sources contributing the pollutant(s) of concern to listed waters, will justify a state's decision not to include the affected waters on its subsequent §303(d) list. The first and second categories consist primarily of technology-based and water quality-based controls, respectively, that are stringent enough to implement applicable water quality standards [40 CFR §130.7(b)(1)(i) & (ii)]. Under the third category, a state may elect not to list a water where "other pollution requirements", such as required BMPs, are stringent enough to implement applicable water quality standards [40 CFR §130.7(b)(1)(iii)].

With respect to the third category of controls, a water need not be listed if data analysis shows that the pollution control requirements will result in the attainment of applicable water quality standards in a reasonable timeframe. For each category, implementation of controls sufficient to implement applicable water quality standards obviates the need for a TMDL, inasmuch as a TMDL is simply one tool to obtain that result. As discussed previously, states should implement a tracking method to ensure that the controls indeed are being implemented and that they are, in fact, stringent enough to implement applicable water quality standards.

TMDL Implementation. In its 1994 listing guidance, EPA allowed the Regional offices to determine whether states should maintain waterbodies on their §303(d) lists until water quality standards are achieved or should allow waters with approved TMDLs to be removed prior to meeting water quality standards. Region 10, in turn, has decided to offer that same flexibility to the states, subject to the guidance below. The following range of stages in TMDL implementation have been identified to help determine the appropriate point at which to remove a waterbody from the §303(d) list:

- TMDL approved by EPA but not yet implemented;
- TMDL approved and implementation underway;
- Controls have been implemented and improvements verified, but water quality standards are not yet met; or
- Solution in place and water quality standards are achieved (successful TMDL implementation).

EPA recognizes that best professional judgment is involved at each of these steps, particularly in determining a sufficient level of confidence in specified controls. The states may remove a waterbody from the §303(d) list after EPA approves a TMDL, because EPA's approval of a TMDL is predicated upon "reasonable assurance" that water quality standards will be attained. The following guidelines are identified for use by Region 10 states:

Removing waters prior to achieving water quality standards. If states choose to remove waterbodies with approved TMDLs before water quality standards are attained, states must establish a tracking method to ensure that those waterbodies are making the progress anticipated during TMDL development and implementation. At the time the next §303(d) list is submitted, states would need to report on the progress they are making on TMDL implementation for all waters removed from their §303(d) lists on that basis until those waters achieve water quality standards as part of their justification for continuing to exclude those waters from their lists. If the listing cycle is changed in the future, EPA and the states may consider an appropriate reporting requirement for monitoring TMDL progress toward achieving water quality standards.

Keeping waters on the §303(d) list until standards are achieved. EPA also recognizes that some states may wish to keep all water quality-limited waterbodies, including those with approved TMDLs, on their §303(d) lists until water quality standards have actually been achieved. The waterbodies for which TMDLs have been implemented should be identified specifically as a subset of the overall §303(d) list in order to be able to track the progress a state is making toward water quality improvements. By specifically identifying those waters where improvements are occurring, states and the public will be able to focus attention on those waters that still need additional action.

e. SPECIFIC LISTING ISSUES

States have requested clarification for determining whether or not waters impaired due to certain specific circumstances should be considered for inclusion on the §303(d) list. Situations that have been raised most frequently include:

- Naturally impaired waters
- One-time events
- Water-quantity issues
- Intermittent streams

Naturally impaired waters. Naturally impaired waters are those waters in which natural conditions, not human activities, cause exceedances of water quality standards. In general, waters that do not meet water quality standards as a result of "natural conditions" should be included on a state's §303(d) list. EPA notes, however, that state water quality standards

authorize the modification of its criteria to account for natural conditions. If the applicable water quality standard is so modified that state need not include those waters on its §303(d) list because the water would be attaining the applicable water quality standard. For example, Washington's water quality standards include a special provision that substitutes the "natural" condition for the water quality standard when the natural levels for a parameter (e.g., turbidity or temperature) exceed numeric water quality criteria.[11]

EPA recognizes that the term "natural" is undefined. Therefore, this provision relies heavily on best professional judgment or data that demonstrate that water quality exceedances do indeed occur only as a result of natural conditions. Water quality impairment resulting from past activities such as abandoned mines or roads are not considered "natural conditions".

One-time events. One-time events, such as oil spills, may cause a waterbody to exceed water quality standards. One-time events that have long term impacts on water quality -- as opposed to short-term, transient events -- should be considered for inclusion on the §303(d) list. If restoration efforts are underway that are anticipated to meet standards, or if there is an overall restoration plan which considers the combination of restoration actions and natural recovery that will ultimately result in the attainment of standards, states may choose not to list that waterbody from the §303(d) list on the basis that required controls are anticipated to be adequate. If restoration efforts are not anticipated to meet water quality standards, states should keep those waters on the list until a plan or program for restoration and recovery that is expected to attain standards is more fully developed. States may indicate these waters as a low priority for TMDLs if restoration is not feasible or practical.

Water quantity issues. A recent Supreme Court decision explicitly linking water quality and water quantity may provide a basis for listing waters where water quantity affects water quality[12]. The decision clearly indicates that an impairment of a beneficial use is an exceedance of state water quality standards because the purpose of standards is to protect beneficial uses. Thus, states would need to consider streamflow in developing their §303(d) lists. Some examples of reasonable bases for including waters on the lists due to inadequate streamflows would be where a recognized methodology for determining streamflow indicates that flows are inadequate to support beneficial uses. Some consideration of historical streamflows is needed to support such analyses. Another basis for listing waters due to inadequate streamflows is where a state has formally established the minimum streamflows necessary to support beneficial uses.

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[11] *"Whenever the natural conditions of said waters are of a lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria."* WAC 173-201a-070(2).

[12] PUD No. 1 of Jefferson County and City of Tacoma v. Wash. Dept of Ecology, 114 S.Ct. 1900 (1994).

Intermittent streams. Intermittent streams that do not fully support their designated or existing uses should be included on the §303(d) list until these uses are supported. The Clean Water Act directs states to establish water quality standards for waters of the United States. The Act broadly defines waters of the United States; in particular, ephemeral and intermittent streams are included. Such streams do hold water at times, in response to weather patterns, water withdrawal, and upslope management. When holding water, they are important components of the stream ecosystem because they can provide high levels of water quality and quantity, sediment control, nutrients, and sometimes wood debris for downstream reaches of the watershed. They are often largely responsible for maintaining the quality of downstream riverine processes and habitat for considerable distances. Although dry much of the year, when watered, they can provide habitat for aquatic biota. This habitat must be protected so that when the streams are filled with water, the biota can respond to their potential. Intermittent streams may also provide recreational use opportunities.

E. SUMMARY

To date, EPA Region 10's experiences in reviewing states' §303(d) lists suggest that good §303(d) listing processes include the following characteristics:

- The listing process is started early, with one lead individual coordinating the entire process, thus building consistency;
- The listing process is clearly explained to the public;
- There is a clear definition of what constitutes an exceedance of water quality standards;
- There is a clear statement as to whether quality assurance / quality control (QA/QC) plans are required when information is provided to the state and how QA/QC plans are to be applied, as well as discussion on how to assess categories of information for which QA/QC plans are not typically prepared;
- The state uses workgroups or outreach to bring in other agency / tribal groups, industry groups, environmentalists, and the public into the process;
- The state engages in thorough collection and analysis of data;
- The rationale for all listing decisions is clearly documented;

- The state conducts a thorough public participation process, including development of a draft list for public and EPA review, outreach to solicit additional information / data, and responses to all significant, relevant public comments;

- Waterbodies suggested for inclusion or exclusion by public comments are addressed on an individual basis, rather than as broad categories of waters, unless it is very clear that a class or category of waters share the same issues / characteristics;

- All listing decisions made in response to public comments are explained, including an explanation of why or how submitted information was or was not used;

- The state commits to tie priority designations to other efforts, e.g., implementation of a watershed protection approach; and

- The list is submitted to EPA in a timely fashion, with adequate supporting record.

4. Tribal Issues

The guidance document focuses on the listing of waters by states. The 1987 amendments to the Clean Water Act created section 518 which gives the Administrator of EPA the authority to allow qualifying tribes to implement various sections of the Act. This includes the provisions of section 303.

Listing Waters On Reservations Where Tribes Have §303(d) Authority:

Where a tribe has the authority under the Clean Water Act to implement section 303(d), this guidance should be suitable as a basis for tribes to make listing decisions for waters within reservation boundaries. In this guidance, the term "state" shall thus refer to both "states" and "tribes" authorized to implement the requirements of section 303(d)[13].

Listing Waters On Reservations Where Tribes Do Not Have §303(d) Authority:

Where a tribe does not have Clean Water Act authority to implement the requirements of §303(d) for waters within reservation boundaries, EPA maintains that authority. Where a tribe wishes that waters be listed under §303(d), EPA will work in cooperation with the tribe to address tribal concerns regarding waters within reservation boundaries. Options as to how these concerns might be addressed, follow:

- EPA, the tribe and the state explore a co-management process whereby tribal concerns regarding waters within the reservation are addressed jointly through the state §303(d) listing process. This could result in the publication of a state list which includes waters on the tribal reservation, or joint publication of both a state and EPA "Tribal" list of waters.

- If a co-management process option is not selected or if this process fails to resolve tribal listing concerns, EPA would work cooperatively with the tribe to produce a §303(d) list.

Where EPA Region 10 establishes a §303(d) list for on-reservation waters at the request of a particular tribe, the list will be based upon water quality standards established for that particular tribe. If water quality standards have not been adopted for the tribe, the §303(d) list will be established in consideration of tribal concerns and the standards of the downstream state(s) and/or tribes and other applicable standards.

[13] EPA Headquarters will be developing policy clarifying how tribes can become authorized to implement §303(d).

Listing Waters Not Within Reservation Boundaries:

EPA realizes that, as a result of treaty rights, many tribes have legal and resource rights extending beyond reservation boundaries to include areas supporting the biological resources to which tribal members are entitled and upon which they are culturally and economically dependent. EPA therefore recognizes the importance of tribes and states working in a government-to-government relationship to identify and solve water quality problems of mutual concern. This includes the listing of waters under §303(d).

For waters off the reservation, EPA strongly encourages tribes to work directly with the state through its §303(d) listing processes to resolve any concerns with listing of specific waters. EPA Region 10 is taking an active role in helping foster state and tribal relationships, including providing funding and staff support for the Washington Department of Ecology and the Northwest Indian Fisheries Commission to coordinate the processes for listing any impaired waters occurring off-reservation that are protected by treaty. It is hoped that this effort will produce a model for tribal/state co-management that will have application in other states and in other areas of resource management.

For those listing issues which cannot be resolved, EPA will consider the issues as part of its oversight role in reviewing the states' §303(d) lists.

5. Activities in Watersheds with Listed Waters

When states submit their §303(d) lists to EPA, they must indicate priority rankings for developing TMDLs, as well as identify those waters targeted for TMDL development within the next two-year listing cycle. Thus, waters targeted for TMDL development are likely to have additional controls recommended in the near future, and new management activities should strive for the attainment of water quality standards.

Waters identified as medium or low priority for TMDL development may not have additional controls developed for sources in the near future, but nonetheless should be watched closely to minimize future water quality impairment. Therefore, if new resource management activities are contemplated within the watershed that may contribute pollutant(s) of concern to a listed water, EPA expects states to take all steps possible to ensure that new activities will not exacerbate any existing water quality problems, and, wherever possible, actions should be conducted in a manner that leads to overall water quality improvement.

6. Conclusion

The guidance offered in this document should help the §303(d) list to be a more comprehensive, inclusive document that serves as a blueprint for action to improve a state's water quality and thus help to meet the goals of the Clean Water Act. It offers states flexibility to define, with sufficient confidence, the parameters of their individual lists, yet at the same time offers a baseline of defensible information that must accompany a state's list. To preserve this flexibility, states must carefully document their reasons for listing or not listing waters.

A successful §303(d) program should result in sound lists with decreasing numbers of waters listed as additional controls are developed and implemented under §303(d) and other Federal, state, and local authorities. It is intended to be a dynamic framework for identifying and tracking the status of waters that need additional action. EPA anticipates that with the issuance of this guidance, program emphasis will shift from the adequacy of the list to securing the water quality improvements envisioned by the Clean Water Act.

APPENDIX A

Other Clean Water Act Lists

This section describes specific types of information collected in other Clean Water Act lists to be considered in the §303(d) process. Included are:

§305(b) Report:

The §305(b) water quality inventory is a biennial report that describes the water quality of all navigable waters in a state, including a state's overall water quality, the causes and sources of water quality impairments, the programs to correct those impairments, and the general trends in water quality. As an overall water quality assessment tool, the §305(b) report functions as a "state of the waters" report, and thus includes a much broader set of waters than the §303(d) list.

As such, it is an important reference tool for building the §303(d) list. For example, states sometimes include waters in their §305(b) report that are suspected of having problems based on anecdotal information. While it is important for the states to keep track of these waters when making decisions about where to focus monitoring efforts, these waters should not be included on the §303(d) list unless other information or data confirms the suspected impairment. When justifying the exclusion of these waterbodies from the list, states should clearly explain why specific waterbodies fail to meet the criteria for inclusion on the §303(d) list. Waters listed as "partially supporting," or "not supporting" designated uses or as "threatened," however, must be evaluated for inclusion on the §303(d) list [40 CFR 130.7(b)(5)(i)] and must be listed if supported by existing and readily available information (which may include the basis for listing the water in the 305(b) report).

§304(l) List:

The §304(l) list was a one-time list with three distinct components that focused primarily on waters that were not reasonably anticipated to attain or maintain water quality standards after meeting technology-based requirements. Most lists were developed in 1989. Because these lists may be out-of-date for identifying currently impaired waters, states will need to evaluate carefully the waters identified on all §304(l) lists for inclusion on the §303(d) lists, based on the criteria below:

- The *"mini" list* (§304(l)(1)(A)(i)) consists of waters not expected to meet numeric water quality standards for §307(a) priority pollutants -- from point sources or nonpoint sources -- after technology-based requirements are met. For the §303(d) list, states should determine whether these waters are still water quality-limited and whether or not existing controls will meet standards in the next two-year listing cycle.

Those water quality-limited waters for which existing controls are not expected to achieve water quality standards should be included on the §303(d) list.

► The *"short" list* (§304(l)(1)(B)) consists of waters not expected to meet applicable water quality standards for toxic pollutants (including numeric and narrative criteria) due to point source discharge only. States were required to develop individual control strategies to bring these waters into compliance. States should determine whether or not these control strategies were implemented, and whether or not they achieved water quality standards for the toxic pollutants of concern. If so, these waters should not be included on the §303(d) list. Waters should be included on the §303(d) list if individual control strategies were not implemented or did not result in attainment of water quality standards.

► The *"long" list* (§304(l)(1)(A)(ii)) is a comprehensive list of waters not meeting fishable or swimmable goals due to pollutants from either point or nonpoint sources. States should consider waters on this list for inclusion on §303(d) lists.

§319 List:

Section 319 lists are a one-time assessment of the types and extent of nonpoint source pollution statewide. Most of these lists were developed in 1989. These lists are prerequisites for states to receive §319 grants to address nonpoint source pollution problems. Because the §303(d) list includes waters impaired primarily or solely by nonpoint sources, the §319 list is one appropriate source of information from which to build the §303(d) list.

Waters included on the §319 list may be kept off the §303(d) list if a state can demonstrate that BMPs required by local, state, tribal or federal authorities are anticipated to meet water quality standards. States were often very inclusive in developing §319 lists, including "suspect" waters, so as not to preclude those waters from being eligible for §319 grant funds. Where states included such waters on the §319 list, they may justify excluding those waters from the §303(d) list. In making this justification, states should clearly explain why specific waterbodies fail to meet the criteria for inclusion on the §303(d) list.

§314 List:

Section 314 requires states to prepare, on a biennial basis, a list of the water quality status and trends of significant publicly owned lakes, including the extent of point and nonpoint source problems due to toxics, conventional pollutants, and acidification. The §303(d) list should include water quality-limited waters from the §314 list where controls are not expected to meet water quality standards within the next two-year listing cycle. The §314 lists are required to be included in states' §305(b) reports.